

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**LAND SMOOTHING**

(acre)

**CODE 466**

**DEFINITION**

Removing irregularities on the land surface by use of special equipment.

Land smoothing is limited to areas having adequate soil depth or where topsoil can be salvaged and replaced.

**PURPOSES**

This practice may be applied as part of a resource management system to support one or more of the following:

- ☐ Improve surface drainage
- ☐ Provide for more effective use of precipitation
- ☐ Obtain more uniform planting depths
- ☐ Provide for more uniform cultivation
- ☐ Improve equipment operation efficiency
- ☐ Improve terrace alignment
- ☐ Facilitate contour cultivation
- ☐ Improve irrigation application uniformity

**CRITERIA**

The extent of rough grading required and tolerances of the finished smoothing job shall be in keeping with the requirements of the planned cropping system or land use.

**CONSIDERATIONS**

**Water Quantity**

1. Effects on the water budget, especially on volumes and rates of runoff, evaporation, and infiltration.
2. Potential for changes in plant growth and transpiration because of changes in the soil water.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to operations classed as rough grading, where depressions, mounds, old terraces, turn rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices.

Land smoothing shall be planned as a component of an overall system to facilitate the conservation use of soil and water resources.

Ordinarily, this land smoothing design does not require a complete grid survey. Land smoothing does not apply to "floating" or "planing" done as a regular maintenance practice on irrigated land or as the final step in Precision Land Forming (462) or in Irrigation Land Leveling (464).

**Water Quality**

1. Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.

Improved equipment operation efficiency can decrease the required time to complete farming or other operations.

**PLANS AND SPECIFICATIONS**

Plans and specifications for land smoothing shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

## OPERATION AND MAINTENANCE

An Operation and Maintenance plan must be prepared for use by the landowner or operator responsible for land smoothing operation and maintenance. The plan should provide specific instructions for operating and maintaining smoothed land to help insure proper system performance. Minimum requirements to be addressed in the Operation and Maintenance Plan are:

1. Avoid use of tillage equipment that leaves ridges or depressions that cannot be removed by subsequent tillage operations.
2. On cultivated land, periodically smooth land areas to reestablish the installed field condition. Maintain good vegetative cover on all other areas.
3. Eradicate or otherwise remove all rodents or burrowing animals. Immediately repair any damage caused by their activity.
4. Immediately repair any vandalism, vehicular, or livestock damage

List other items specific to this project on the Operation and Maintenance Worksheet.

## REFERENCES

USDA NRCS, Washington Irrigation Guide.

USDA NRCS, Standard Drawings Handbook - Washington.

USDA NRCS, National Engineering Field Handbook, Chapters 3 and 15.

USDA NRCS, National Engineering Handbook Series: Part 623 Irrigation and Part 652 Irrigation Guide